

REMARKS

Claims 1-3, 5 and 8 to 20 are pending in the application.

Claim 1 has been amended with the subject matter of claims 4 and 6 and claim 19 has been made dependent on claim 10. No new matter has been added.

Claim 19 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 depends on claim 7, which is cancelled. (Office Action p.2)

Claim 19 has been made dependent on claim 10, making this rejection now moot.

Claims 1-4, 6, and 8-20 are rejected under 35 U.S.C. §102(a) as being anticipated by Okumura, et al. (U.S. Patent Application Publication 2002/0055030 A1), evidenced by Hideo, et al. (JP 61-009424A).

In brief the claimed invention is achieved by using both the urethan-modified epoxy (meth)acrylate (B) and the (meth)acrylate (C). As will be explained below, Okumura never discloses nor suggests the (meth)acrylate (C) used in the claimed invention, and therefore cannot be anticipatory. Hideo also fails to disclose (meth)acrylate (C).

As disclosed in the present description, page 4, first paragraph, there has not yet been made a conductive resin composition which is excellent in filling into a mold having a complicated shape, and also ensures high-level mechanical strength, conductivity, gas impermeability, corrosion

resistance, and durability such as hydrolysis resistance of the resulting molded article. That is, the object of the claimed invention is to provide a conductive resin composition which solves the problems.

Among these problems, in particular, in order to improve heat resistance and mechanical strength of the molded article, the urethan-modified epoxy (meth)acrylate (B) is used in the claimed invention. However, since urethan-modified epoxy (meth)acrylate (B) has high viscosity, the (meth)acrylate (C) is used as a diluent, so as to improve handling properties on preparation of the resin composition and to uniformly disperse other components such as a conductive filler.

Specifically, the (meth)acrylate (C) exerts the effect of imparting plasticity to the urethane-modified epoxy (meth)acrylate (B). This causes chain elongation, and improving filling of a resin composition into a mold while suppressing the occurrence of separation between a resin component and a conductive filter, which constitutes the conductive resin composition of the claimed invention, and thus reducing warp of the molded article, as disclosed in the present description, page 14, second paragraph.

In summary, the object is achieved by using both the urethan-modified epoxy (meth)acrylate (B) and the (meth)acrylate (C).

In contrast, Okumura (US2002/55030A1) discloses the conductive resin composition for a separator used in a fuel cell comprising vinyl ester resin and a conductive filler. However, Okumura never discloses nor suggests the (meth)acrylate (C) used in the claims. Okumura discloses a radical-polymerizable diluent used for the radical-polymerizable thermosetting resin ([0058]-[0061]), **but the (meth)acrylate (C) in the present invention is not included.** In addition, Hideo (JP 61-009424) does not disclose the (meth)acrylate (C). Hideo merely disclose urethane (meth)acrylate resin.

Since the conductive resin composition of the claimed invention comprises the (meth)acrylate (C) which is not disclosed in the cited references, it can yield unique effects which cannot be obtained by the cited references. It is clear from the following comparisons:

Comparative Examples 1 to 3 in the present description comprise the conductive filler (A) (carbon black), vinyl ester resin, unsaturated monomers (divinyl benzene, styrene monomer), and polyisocyanate, and these do not contain the (meth)acrylate (C). In contrast, Examples 1 to 6 contain the (meth)acrylate (C) in addition to the components in Comparative Examples 1 to 3. Appearance of molded articles, conductivity, strength, and the like of the molded article obtained from the conductive composition are evaluated and the results are shown in Tables 3 and 4 (p.31 and 32). It is clear from Tables 3 and 4 that the composition which does not contain the (meth)acrylate (C) has inferior properties to the composition containing the (meth)acrylate (C).'

In light of the fact that Okumura and Hideo are chemically distinct from the invention now claimed, it is respectfully requested that the rejection be withdrawn.

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Okumura, et al., in view of Toshiro, et al. (JP 03-199230).

The Examiner concedes that Okumura fails to teach an alkylene oxide adduct of a multinucleate phenolic compound, and cites Toshiro for this disclosure.

Further, Toshiro relates to an invention of polyurethane resin obtained by using polycarbonate diol which is obtained by carbonate and aliphatic diol, and in particular, this has a feature in that alkylene oxide adduct of 2,2-bis(4-hydroxyphenyl)propane is used as the aliphatic diol. **Toshiro does not disclose an alkylene oxide adducts of a multinucleate phenolic**

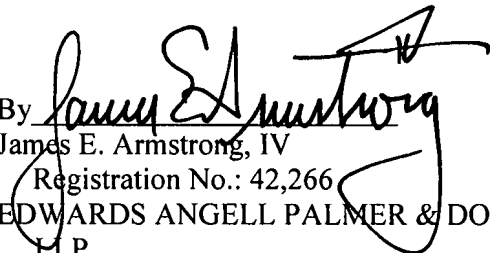
compound which is reacted with polyisocyanate to obtain (meth)acrylate. Toshiro is chemically different from the claimed invention.

It is respectfully requested that the rejection be reconsidered and withdrawn in light of the showing above.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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